Data Interpretation Exercise for IBPS PO Pre, IBPS Clerk, SBI PO Pre and SBI Clerk Exams

DI TABLE CHART NO. 81

Direction: Study the following information carefully and the answer the questions.

Ram bought five cars in a day and put on rent for 15 days. The table represents the mileage of the cars, average amount of petrol used by each car per day, and the total time taken to cover the total distance which is covered during 15 days. (The time when the car was standing is not taken as consideration)

	Mileage of car	Average amount of petrol used per day	Total time taken to cover the total distance which is covered during15 days
Car A	22 km/litres	8 litres	48 hours
Car B	15 km/litres	12 litres	50 hours
Car C	25 km/litres	9 liters	45 hours
Car D	18 km/litres	20 litres	75 hours
Car E	24 km/litres	16 litres	90 hours

1. What was the ratio of the average speed of Car A and Car C during 15 days?

A. 11 : 13 B. 11 : 15 C. 13 : 11

D. 15 : 11 E. None of these

2. Car A and Car E is travelling towards each other with speed same as the average speed of it during the given 15 days. After meeting, they travel to each other's starting point. If initially distance between both cars is 2380 km then find difference of the time taken by car A and car B to reach their destination after meeting each other.

A. (1089/176) hours B. (971/176) hours C. (1071/176) hours

D. (1061/176) hours E. None of these

3. Find the ratio of the time taken by Car D to travel 1080 km to the time taken by car B to travel 972 km, with the speed same as the average speed of it during the given 15 days.

A. 4 : 5 B. 5 : 6 C. 6 : 11

D. 7 : 8 E. 9 : 10

4. If the total distances covered by all the cars in 15 days is covered by car G and car H in 159 hours and 265 hours respectively then find the difference between average speeds of car G and Car H.

A. 40 km/h B. 55 km/h C. 45 km/h

D. 50 km/h E. 60 km/h

5. Car C is travelling from point P to point Q and car D is travelling from point Q to point P. After every hour car C increases its speed by 6 km/h and car D decreases its speed by 3 km/h. If distance between point P and point Q is meet 765 km, then find the time taken by car C to reach point Q after meeting car D if after meeting both the cars travel at their initial speed. (The initial speed to be considered for Car C and Car D is the average speed during 15 days)

A. 5.2 hours B. 4.6 hours C. 4.4 hours

D. 5 hours E. 4.8 hours

Correct answers:

1	2	3	4	5
B	C	B	D	C

Explanations:

1.

	Total distance covered in 15 days	Average Speed during 15 days
Car A	22 × 8 × 15 = 2640 km	2640/48 = 55km/h
Car B	15 × 12 × 15 = 2700 km	2700/50 = 54 km/h
Car C	25 × 9 × 15 = 3375 km	3375/45 = 75 km/h
Car D	18 × 20 × 15 = 5400 km	5400/75 = 72km/h
Car E	24 × 16 × 15 = 5760 km	5760/90 = 64km/h

Required ratio = 55 : 75 = 11: 15

Hence, option B is correct.

2.

	Total distance covered in 15 days	Average Speed during 15 days
Car A	22 × 8 × 15 = 2640 km	2640/48 = 55 km/h
Car B	15 × 12 × 15 = 2700 km	2700/50 = 54 km/h
Car C	25 × 9 × 15 = 3375 km	3375/45 = 75 km/h
Car D	18 × 20 × 15 = 5400 km	5400/75 = 72 km/h
Car E	24 × 16 × 15 = 5760 km	5760/90 = 64 km/h

Relative speed = 55 + 64 = 119 km/h

Time taken to meet each other = 2380/119 = 20 hours

Time taken by car A to travel its destination after meeting

= (2380/55) – 20

= (476/11) – 20

= 256/11 hours

Time taken by car E to travel its destination after meeting

= (2380/64) – 20

= (595/16) – 20

= 275/16 hours

Required difference = (256/11) – (275/16) = (1071/176) hours

Hence, option C is correct.

3.

	Total distance covered in 15 days	**Average Speed during 15 days**
Car A	22 × 8 × 15 = 2640 km	2640/48 = 55 km/h
Car B	15 × 12 × 15 = 2700 km	2700/50 = 54 km/h
Car C	25 × 9 × 15 = 3375 km	3375/45 = 75 km/h
Car D	18 × 20 × 15 = 5400 km	5400/75 = 72 km/h
Car E	24 × 16 × 15 = 5760 km	5760/90 = 64 km/h

Time taken by car B = 972/54 = 18 hours

Time taken by car D = 1080/72 = 15 hours

Required ratio = 15: 18 = 5: 6

Hence, option B is correct.

4.

	Total distance covered in 15 days	Average Speed during 15 days
Car A	22 × 8 × 15 = 2640 km	2640/48 = 55 km/h
Car B	15 × 12 × 15 = 2700 km	2700/50 = 54 km/h
Car C	25 × 9 × 15 = 3375 km	3375/45 = 75 km/h
Car D	18 × 20 × 15 = 5400 km	5400/75 = 72 km/h
Car E	24 × 16 × 15 = 5760 km	5760/90 = 64 km/h

Total distance = 2640 + 2700 + 3375 + 5400 + 5760 = 19875 km

Average speed of car G = 19875/159 = 125 km/h

Average speed of car H = 19875/265 = 75 km/h

Required difference = 125 – 75 = 50 km/h

Hence, option D is correct.

5.

	Total distance covered in 15 days	Average Speed during 15 days
Car A	22 × 8 × 15 = 2640 km	2640/48 = 55 km/h
Car B	15 × 12 × 15 = 2700 km	2700/50 = 54 km/h
Car C	25 × 9 × 15 = 3375 km	3375/45 = 75 km/h
Car D	18 × 20 × 15 = 5400 km	5400/75 = 72 km/h
Car E	24 × 16 × 15 = 5760 km	5760/90 = 64 km/h

Let, meeting time = ‘n’ hours

Relative speed of Car C and Car D for 1^{st} hour = (75 + 72) km/hr = 147 km/hr

As after every hour car C increases its speed by 6 km/h and car D decreases its speed by 3 km/h.

So after every hour their relative speed increases by (6 – 3) km/hr = 3km/hr
So the speed after 1st hour will be 150, 153, 156 and so on.

Total distance between point P and point Q = 765

$\Rightarrow$ (n/2)[2 × 147 + 3(n – 1)] = 765

$\Rightarrow$ (n/2)[294 + 3n – 3] = 765

$\Rightarrow$ n = 5

So after 5 hours Car C and Car D meet each other.

In 5 hours Car C covered a distance of (75 + 81 + 87 + 93 + 99) km = 435 km
[As the speed increases every hour by 6km/hr]

Car C has to cover total distance of (765 – 435)= 330 km after meeting car D.

Therefore, required time = 330/75 = 4.4 hours[It is divided by 75 because after meeting it travels at its initial speed]

Hence, option C is correct.